

MP2D

User's Manual

TWO CHANNELS MICROPHONE /
INSTRUMENT PREAMPLIFIER WITH STEREO BUS



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— English —

SAFETY RELATED SYMBOLS



This symbol, wherever used, alerts you to the presence of un-insulated and dangerous voltages within the product enclosure. These are voltages that may be sufficient to constitute the risk of electric shock or death.



This symbol, wherever used, alerts you to important operating and maintenance instructions. Please read.



Protective Ground Terminal



AC mains (Alternating Current)



Hazardous Live Terminal

ON: Denotes the product is turned on.

OFF: Denotes the product is turned off.

WARNING

Describes precautions that should be observed to prevent the possibility of death or injury to the user.

CAUTION

Describes precautions that should be observed to prevent damage to the product.

• **Protective Ground**

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PREFACE

Thank you for choosing ▲LTO MP2D Two Channels Microphone / Instrument Preamplifier with Stereo Bus and thanks for choosing one of the results of ▲LTO AUDIO TEAM job and research.

For our ▲LTO AUDIO TEAM, music and sound are more than a job ... is first of all passion and let us say our obsession! We have been designing professional audio products for a long time in cooperation with some of the major brands in the world in the audio field.

The ▲LTO line presents unparalleled analogue and digital products made by Musicians for Musicians in our R&D centers in Italy, Netherlands, United Kingdom and Taiwan. The core of our digital audio products is a sophisticated Software Team for the last 7 years.

Following this idea we create our products and we will create the new ones! From our side, we guarantee you and we will guarantee you also in future the best quality, the best fruits of our continuous researches and the best prices.

Nothing else to add, but that we would like to thank all the people that made the MP2D Two Channel Microphone / Instrument Preamplifier with Stereo Bus, and thank our designers and all the ▲LTO staff, people who make possible the realization of products containing our idea of music and sound and are ready to support you, our customers, in the best way, conscious that you are our best richness.

Thank you very much

▲LTO AUDIO TEAM

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1. INTRODUCTION

Congratulation! Now you are the owner of the MP2D Two Channel Microphone / Instrument Preamplifier with Stereo Bus, which is provided with 129dB of signal to noise ratio and 0.007% of THD. Each channel provides an 1/4 inch instrument socket , individual phantom power, phase reverse and high pass filter. It is equipped with a "vintage" function to add warm, tube-like sounds to your mix. The MP2D includes a sophisticated 24 bit digital output interface with external / internal clock and AES / EBU and S/ PDIF connectors. We believe MP2D is your perfect choice for enhancing the performance of any console or digital audio workstation by providing two very high-end microphone preamplifiers.

2. FEATURES

- 48V Phantom Power
- 80Hz High Pass Filter
- Polarity Reverse
- "Vintage" function for tube simulation
- Highly accurate 12 Segment Level Display
- Low Impedance Stereo Mix Bus can be used for Full Control Over Stereo Imaging
- Fully Loaded Back Panel Featuring XLR Balanced I/O Connectors as well as Separate Send and Return Jacks for Inserting Dynamics Processors
- Ultra high impedance 1/4" instrument input
- Mix Output Connectors are XLR Balanced Providing Connectivity for Professional Recording Systems

3. CONTROL ELEMENTS

3.1 The Front Panel



① 1/4" Instrument Input Socket

The unit is equipped with two 1/4" instrument inputs, which have been designed to connect some instruments such as electric guitars or basses. They are ultra high impedance amplifier designed to allow the audio potential of an acoustic or electric instrument pickup to be fully realized.

Note: please do not use the pre-amp of the instrument on-board (if possible), in order to avoid distortion caused by over-driving the input signal.

② Input Gain Control

This pot can adjust the gain of the input signal. The gain range can be varied from 0dB to +60dB.

③ Vintage Control

This pot can be used to select the amount of boost (0%-100%) applied to the even harmonic series of the signal being amplified by a channel of the MP2D. The effect of manipulating the harmonic distortion is of increasing or decreasing the apparent "warmth" of the signal. This capability is derived from the transformer and its dual servo gain stage.

④ Phantom Power Switch

The unit provides +48V Phantom Power to every channel. Via this lighted switch, you can turn on /off the +48V phantom Power for condenser microphone.

Note: please do not connect dynamic microphone when the phantom Power is on. Otherwise, It may damage the device and the microphone.

5 High Pass Filter Switch

The unit provides an 80Hz high pass filter for each channel. You will activate the filter by pressing this switch. This filter is useful for eliminating extraneous low-end information from the signal being amplified. Frequencies from eighty hertz and below are cut from the incoming signal. But never press the switch when in music or bass musical instrument application or the plump bass of music, or musical instrument will disappear.

6 L/R Assign Switch

This L/R button assigns the signal coming through the channel to the stereo bus output.

7 Polarity Reverse Switch

This phase reverse switch is provided for each channel. This switch enables the user to invert the phase of a microphone when phase cancellation is noted. The phase reverse switch allows the operator to avoid phase cancellation when identical microphones are used in close proximity to one another. The phase reverse switch also can compensate for different XLR connector hook-ups where pin connections have been inverted.

8 PAN/BAL Control

This pot controls the channel's position between left and right in the stereo bus. Of course you can use it to "move" the channel signal in stereo front to create spatial effects as well as.

9 Output Level LED Display

The highly accurate 12-segments LED meter indicates the level of the output signal. When these two red LEDs flash, it will warn you that the level of output signal is too high and may cause distortion, please attenuate the level of the input signal or the output signal.

10 MASTER LEVEL Control

This pot adjusts the output level of the Stereo Bus. Channels are assigned to the bus via the L/R assign switch on each of the two preamplifier channels of the MP2D

11 PHONE Socket

This 1/4" socket will send out the signal to a pair of headphones. The signal monitored by the headphones is the same signal provided by the stereo Bus to the Mix output XLR's on the rear panel of the MP2D.

12 Phone Volume Control

It adjusts the headphones volume by rotating the volume control pot.

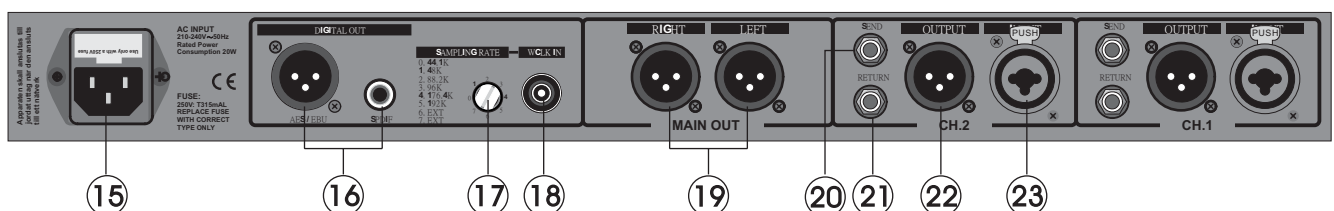
13 Power LED

This LED lights up when the power is on.

14 Power switch.

It switches on / off MP2D main power.

3.2 The Rear Panel



⑮ AC Inlet

Standard IEC receptacle, connect your MP2D to mains with the supplied power cord. Before powering up your MP2D for the first time, make certain the stated power requirement of the instrument matches the voltage supplied in the country. Failure to do so could result in injury to the user and the probability of irreparable damage to the unit is highly likely.

⑯ Digital output Connector

These connectors are professional interfaces for transmitting digital audio signal, which come configured for AES output and SPDIF output.

⑰ Sample Rate Selector

The unit is provided with 6 different internal sample rates : 44.1k, 48k, 88.2 k, 96k, 176.4k, 192k, you can use this knob to select the sample rate for the unit. Numbers 0-5 stand for internal sample rates. When you use EXT CLOCK function, you should turn the knob to 6 or 7 position.

⑱ WCLK IN Connector

The WCLK IN is accessed through separate BNC connectors. The WCLK IN scans the incoming information and automatically synchs to the necessary sample rate. If you need to use EXT CLOCK , please turn the sample rate knob to 6 or 7 position.

⑲ MAIN OUTPUT

This stereo output is supplied with two XLR connectors for the RIGHT and LEFT output of the stereo main bus. Signals are assigned to these outputs using the L / R assign switches on the individual channels.

⑳ SEND Connector

This 1/4 inch socket is used to sent out the signal from the MP2D to external devices such as effects or sound processors.

㉑ RETURN Connector

This 1/4 inch socket is used to return the signal of external unit to the main mix. You can also use it as an extra auxiliary input.

㉒ Output Connector

This XLR connector provides the analogue signal from the relevant channel to audio equipment.

㉓ Input Connector

This combo connector is used to input the signal.

4. INSTALLATION AND CONNECTION

4.1 Mains Connection

4.2 Audio Connection

The MP2D presents with balanced XLR & 1/4" TRS and combo connectors, and it can be interfaced by several ways to support a variety of applications without any signal loss. The MP2D can be used on a single instrument by connecting to a mixing console's main inserts, or on an entire mix "in-line" between a mixing console's outputs and a power amplifier.

- Wiring Configuration

Either the 1/4" TRS phone jack or the XLR connector can be wired in balanced and unbalanced modes, which will be determined by the actual application status, please wire your system as the following wiring examples:

- XLR Connector Wiring For Phantom Power

PIN 1 GND
PIN 2 +48v
PIN 3 +48v

6. TECHNICAL SPECIFICATION

INPUT	
Connectors	XLR and 1/4" TRS (Pin 2 and Tip hot)
Type	Electronically balanced/unbalanced, RF filtered
Impedance	Balanced >50Kohm, Unbalanced>25Kohm
Max input level	>+24dBu balanced and unbalanced
CMRR	Typically>60dB at 1KHz

OUTPUT	
Connectors	XLR and 1/4" TRS (Pin 2 and Tip hot)
	Four balanced XLR
	AES/ EBU, SPDIF
Type	Electronically balanced/unbalanced, RF filtered
Impedance	Balanced 120ohm, Unbalanced>60ohm
Max output level	>+21dBu,+20dBm balanced and unbalanced

SYSTEM SPECIFICATIONS		
Bandwidth	20HZ to 20kHz, +0/-0.5dB	
Frequency Response	10Hz to 200kHz,+0/-3dB	
Signal/Noise	128dBu, weighted, 22Hz to 22kHz	
THD	<0.007% (no vintage)	
	0.5% (vintage max)	
Crosstalk	<-100dB, 22Hz to 22Khz	
Stereo Coupling	True RMS detection	
Digital	Sampling Rates	44.1k, 48k, 88.2k, 96k, 176.4k, 192k
	Output	24-bit

FUNCTION SWITCHES	
48 Volt Phantom Power	Each channel of the MP2D has 48V Phantom power available.
Polarity Reverse	A phase reverse switch is provided on each channel
Rumble Filter	A Rumble filter is provided on each channel for eliminating low frequency noise
Main L/R bus selection	The MP2D has a stereo summing bus for combining the input signals assigned to the bus using the L/R function switch on the front panel of the MP2D

INDICATORS	
INPUT LEVEL	12 element LED display: -30/-24/-16/-8/-4/-2/0/2/4/8/16/24 dB.
Function switch	LED indicator for each

POWER SUPPLY		
Mains Voltages	USA/Canada	~120VAC, 60Hz
	U.K./Australia	~240VAC, 50Hz
	Europe	~230VAC, 50Hz
	General Export Model	~100-120VAC,
~200-240VAC, 50-60Hz		
Fuse	100-120VAC : 400mA (SLOW-BLOW)	
	200-240VAC : 200mA (SLOW-BLOW)	
Power consumption	20 Watts	
Mains Connection	Standard IEC receptacle	

PHYSICAL	
Dimension	W(483.0)*D(288.0)*H(44.2) mm
Net Weight	3.3Kg

7. WARRANTY

1. WARRANTY REGISTRATION CARD

To obtain Warranty Service, the buyer should first fill out and return the enclosed Warranty Registration Card within 10 days of the Purchase Date.

All the information presented in this Warranty Registration Card gives the manufacturer a better understanding of the sales status, so as to purport a more effective and efficient after-sales warranty service.

Please fill out all the information carefully and genuinely, miswriting or absence of this card will void your warranty service.

2. RETURN NOTICE

2.1 In case of return for any warranty service, please make sure that the product is well packed in its original shipping carton, and it can protect your unit from any other extra damage.

2.2 Please provide a copy of your sales receipt or other proof of purchase with the returned machine, and give detail information about your return address and contact telephone number.

2.3 A brief description of the defect will be appreciated.

2.4 Please prepay all the costs involved in the return shipping, handling and insurance.

3. TERMS AND CONDITIONS

3.1 ▲LTO warrants that this product will be free from any defects in materials and/or workmanship for a period of 1 year from the purchase date if you have completed the Warranty Registration Card in time.

3.2 The warranty service is only available to the original consumer, who purchased this product directly from the retail dealer, and it can not be transferred.

3.3 During the warranty service, ▲LTO may repair or replace this product at its own option at no charge to you for parts or for labor in accordance with the right side of this limited warranty.

3.4 This warranty does not apply to the damages to this product that occurred as the following conditions:

- Instead of operating in accordance with the user's manual thoroughly, any abuse or misuse of this product.
- Normal tear and wear.
- The product has been altered or modified in any way.
- Damage which may have been caused either directly or indirectly by another product / force / etc.
- Abnormal service or repairing by anyone other than the qualified personnel or technician.

And in such cases, all the expenses will be charged to the buyer.

3.5 In no event shall ▲LTO be liable for any incidental or consequential damages. Some states do not allow the exclusion or limitation of incidental or consequential damages, so the above exclusion or limitation may not apply to you.

3.6 This warranty gives you the specific rights, and these rights are compatible with the state laws, you may also have other statutory rights that may vary from state to state.

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